US ENVIRONMENTAL PROTECTION AGENCY
Region 1 New England - OEME
11 Technology Drive, North Chelmsford, MA 01863

Inspection Report

Date:	October 28, 2014
Subject:	Visser Brothers Farm - Concentrated Animal Feeding Operation (CAFO) Inspection
Prepared by:	Lisa Thuot – USEPA Compliance Inspector

I. Facility Information:

Name:	Visser Brothers Farm
Location:	2620 Panton Rd. Panton, VT 05491
Owner/Operator:	Mark Visser, Owner Eric Visser, Owner
Mailing Address:	168 Stove Pipe City Rd. Panton, VT 05491

II. Inspection Information:

Date of Inspection:	June 26, 2014
EPA Inspector(s):	Lisa Thuot – Compliance Inspector (EPA Region 1/OEME) Diane Boisclair – Compliance Inspector (EPA Region 1/OES)
Facility Contact(s) During Inspection:	Mark Visser, Owner
State Contact(s):	Katie Gehr, VT Agency of Agriculture
Weather Conditions:	Overcast, approximately 68°F

III. Purpose of Inspection:

The purpose of the inspection was to assess applicability of the Concentrated Animal Feeding Operation requirements under the Clean Water Act at 40 C.F.R. Part 122.23.

Entry Procedures
The inspection was announced in advance by telephone to Mark Visser. Upon arrival we presented our EPA inspector credentials to Mr. Visser, who provided a tour. Eric Visser, a co-owner, was not present during the inspection. Inspectors disinfected their rubber boots prior to walking around the farm.

IV. Inspection Information

Visser Brothers Farm ("the farm") is a dairy operation with approximately 195 mature dairy cows (180 milking cows plus dry cows). Mr. Visser said the number of mature dairy cows can fluctuate. Katie Gehr explained to Mr. Visser that medium farms in Vermont with over 200 dairy cows are regulated under the Agency of Agriculture's medium farm operations (MFO) permit, and need to submit a notice of intent (NOI) to comply with the MFO permit. According to Nate Sands of the VT Agency of Agriculture, the farm has reported having 200 dairy cows in the past. The dairy cows and about 20 heifers are located at the main farm on 2620 Panton Rd. There are 180 heifers at the heifer farm located across the street at the intersection of Stove Pipe City Rd. and Panton Rd.

The farm has approximately 450 acres, which includes 320 owned acres and 130 rented acres. Corn is grown on about 175 acres and cover crops on 80 acres. The farm has a current nutrient management plan (NMP) prepared by Bourdeau Brothers of Middlebury, VT. The NMP was reviewed by Katie Gehr. Chopped hay bedding is used in the main milking barn and heifer barns. The farm is on the Tri-City public water supply. The farm's mortality compost pile is located to the south, in the corner of a crop field. Mr. Visser said the mortality compost pile is accessible during the winter. Agrimark picks up milk from the farm.

<u>Main Farm</u>:

The manure pit was designed by NRCS; the original manure pit was expanded and updated sometime during the 1990s (picture #1). Mr. Visser said the manure pit can hold the necessary capacity through winter and he does not need a winter spreading exception. Manure is land-applied periodically by employees using farm-owned equipment during the spreading season after crop cuts. Manure is scraped and pushed from the milking barn by skid steer directly into the manure pit.

Milkhouse wastewater is directed into a holding tank that connects to the manure pit. The holding tank is located outside the milking barn and is covered by a calf hutch. Mr. Visser said the holding tank would never overflow because it is connected to another drain in the milking barn. The holding area for cows waiting to be being milked is periodically washed down, and the wash water enters the milkhouse wastewater holding tank. The main milking barn does not have roof gutters. However Mr. Visser said there is a clean water diversion/drainage system around the barn. The clean water discharges from a pipe to Dead Creek, located to the south.

The heifers and dry cows are periodically outside at the main farm in a heavy use area/pasture that extends south from the milking barn to the bank of Dead Creek. There is a low-height perimeter fence along the edge of Dead Creek. Inspectors observed fence damage in several

locations, riverbank erosion from cow traffic, and evidence of animal access to Dead Creek (pictures #2-3). Inspectors also observed hoof prints and bones where the clean water diversion pipe discharges on the bank of Dead Creek (picture #4). Mr. Visser said the fence will need to be repaired. Katie Gehr recommended moving the fence farther back into the pasture area and away from the edge of Dead Creek.

Silage is stored in concrete bunkers on a cement pad. The farm does not have a silage leachate/runoff collection system. Drainage from the west side of the silage bunkers drains toward the manure pit (pictures #5-6). The east side of the silage bunkers are open and do not have a back retaining wall. Drainage from the northeast side of the silage bunkers was pooling in an adjacent dirt area (picture #7). Drainage from the southeast side of the silage bunkers flows into a vegetated, grassy drainage swale and into a dirt drainage ditch bordering a corn crop field (picture #8-10); the corn field is not owned by Mr. Visser. The drainage ditch continues to flow south along the perimeter of the corn field and the heavy use pasture, and discharges into wetlands bordering Dead Creek (pictures #11-12). The drainage ditch also receives runoff from the adjacent corn crop field.

Inspectors collected a water sample [#1] from the vegetated swale that receives silage runoff, where it flows into the drainage ditch at the fence gate (see picture #10). Inspectors also collected a water sample [#2] from a step in the drainage ditch where it travels down-slope to Dead Creek (see picture #11). Water samples were screened using field test kits for ammonia, nitrate/nitrite, and phosphate. The following table summarizes the field test screening results:

	Ammonia	Nitrate/Nitrite (NO_3/NO_2)	Phosphate (PO_4^-)
Sample #1	0.5 – 1.0 ppm	0.15 ppm	30-50 ppm
Sample #2	1.0 ppm	0.15 ppm	30 ppm

The main farm has an open exercise lot for small heifers located southwest of the barns. Mr. Visser said this exercise lot is typically only used during warm weather months. Inspectors observed water pooling at the west end of the exercise lot, which settles into the ground or flows into an adjacent drainage swale (pictures #13-14). The drainage swale flows north and connects to a roadside drainage ditch that runs parallel to Panton Road. The final destination or discharge point of the roadside ditch is unknown.

Calf hutches are situated west of the milking barn in a grassed area bordering Panton Road. No issues were observed with the calf hutches.

Heifer Farm:

Manure is cleaned out of the heifer barn by skid steer and bucket-loader twice per week. The manure is transferred across the street to the manure pit at the main farm (pictures #15-16). Some residual/trace manure was observed on Stove Pipe City Road. Mr. Visser said they previously used an underground manure hopper and piping system to transfer manure to the pit, but it had become clogged several years ago. A holding coral outside the barn is used to temporarily hold heifers while manure is cleaned from the barn. Grain meal was being stored

under cover. Mr. Visser said two grain silos at the heifer farm are not being used and will eventually be removed. A small pond located just north of the barn was previously used as the heifer drinking source prior to the farm connecting to the town water supply.

Inspectors observed water pooling between the heifer barn and tractor/equipment storage area (picture #17). Mr. Visser said the water is supposed to flow into a yard drain which has a culvert to a roadside drainage ditch (#1) on the west side of Stove Pipe City Road. He said the yard drain was currently clogged with dirt. Drainage ditch #1 flows north for approximately 0.10 miles, after which drainage would discharge to Dead Creek via an overland path of approximately 0.3 miles.

A pile of used bedding was sitting on a concrete pad at the heifer farm (picture #18). Runoff from this pad would flow into a roadside drainage ditch (#2) located on the east side of Stove Pipe City Road. Drainage ditch #2 also flows to the north. Inspectors could not determine if there was a connection from drainage ditch #2 to Dead Creek or a water of the U.S.

V. Exit Briefing

EPA inspectors conducted an exit briefing at the main farm with Mr. Visser. Katie Gehr was also present. The following items were noted:

- Fence damage, riverbank erosion, cow traffic, and evidence of animal access to Dead Creek were observed at the south perimeter of the heavy use pasture. Katie Gehr had suggested moving the fence further back into the pasture, away from the edge of the creek.
- Runoff/drainage from the southeast side of the silage bunkers flows into a vegetated swale and into a drainage ditch that flows south to Dead Creek.
- The roadside drainage ditch (#1), on the west side of Stove Pipe City Road, receives runoff from a yard drain at the heifer farm. At the time of inspection the yard drain was clogged so water was pooling outside the equipment storage area and did not appear to be discharging into ditch #1.
- Drainage ditch #1 also receives runoff from runoff from Stove Pipe City Road; residual manure on the road (from manure transfers from the heifer farm to the manure pit) should be periodically scraped up/cleaned.

Enclosures/Attachments:

Aerial map
Inspection Pictures